



Infectious Disease Epidemiology Report

Salmonellosis Surveillance Report – Maine, 2009



Introduction

Salmonellosis is an illness caused by Salmonella bacteria. There are over 2,000 different serotypes of Salmonella. Symptoms include diarrhea, abdominal pain, fever, and sometimes nausea and vomiting. Symptoms appear between 6-72 hours after exposure to the bacteria. The illness typically lasts 5-7 days, and most people recover without treatment. Some people with salmonellosis may not look or feel sick, but may still shed the bacteria in their stool and pass the bacteria to others. Severe infections are more commonly seen in young children, the elderly, and those who are immunocompromised.

Salmonellosis is one of the most frequent foodborne diseases reported in Maine and the United States. Nationwide, an estimated 1.4 million infections occur each year, resulting in approximately 15,000 hospitalizations and 400 deaths.

Methods

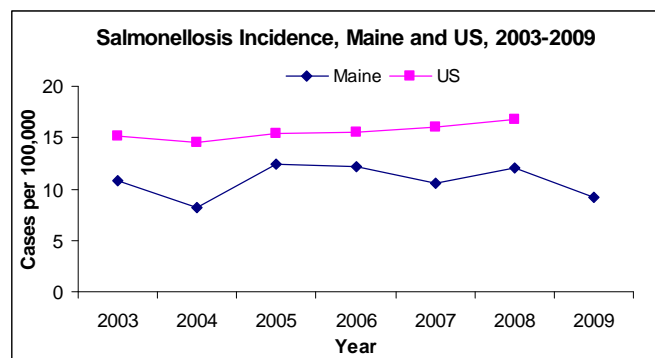
The Infectious Disease Epidemiology Program and the Maine Health and Environmental Testing Laboratory (HETL) of the Maine Center for Disease Control and Prevention monitor the incidence of salmonellosis through disease reports from health care providers and laboratories. All cases are investigated by epidemiologists to find possible sources of the bacteria. Cases are asked for information about prior food consumption, travel, water exposures and animal exposures. All information collected on exposures is analyzed to determine if there are any common sources of infection.

HETL routinely conducts serotype testing and molecular laboratory testing on all salmonella isolates. The testing, Pulsed Field Gel Electrophoresis (PFGE), allows for identification of specific DNA patterns with serotypes of salmonella. The pattern identified by PFGE is compared with other salmonella isolates within the state and across the country to identify clusters of illness.

Results

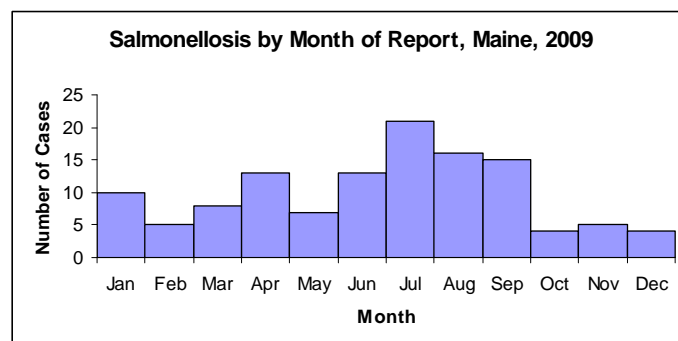
A total of 121 salmonellosis cases were reported in 2009. One hundred and fourteen (94%) cases

were culture-confirmed and 7 (6%) cases were classified as probable, defined as clinically compatible to a laboratory confirmed case and epidemiologically linked. The rate in Maine decreased from 2008 to 9.2 cases per 100,000 persons.



Sixty-nine (57%) of the reported cases were female and 52 cases (43%) were male. The median age was 42 years, with a range of 5 months to 95 years old.

The majority of the cases, 54%, were reported from June through September.



The majority of salmonella cases occur in the most populated counties in Maine: Cumberland, York and Androscoggin.

Salmonellosis by County, Maine 2009

County	Cases	Rate	Percentage
Androscoggin	12	11.3	9.9
Aroostook	2	2.8	1.7
Cumberland	32	11.5	26.4

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Franklin	6	20.2	5.0
Hancock	7	13.1	5.8
Kennebec	5	4.1	4.1
Knox	3	7.4	2.5
Lincoln	3	8.7	2.5
Oxford	6	10.7	5.0
Penobscot	11	7.4	9.1
Piscataquis	0	0.0	0.0
Sagadahoc	1	2.7	0.8
Somerset	3	5.9	2.5
Waldo	1	2.6	0.8
Washington	0	0.0	0.0
York	29	14.4	24.0
Total	121	9.2	100

The Infectious Disease Epidemiology Program identified one cluster of salmonella cases among Maine residents associated with participants and staff at an adult day center for mentally and physically disabled adults. The outbreak strain was identified as *Salmonella paratyphi B*, also known as *Salmonella 1,4,5,12:B:- (L)+ Tartrate+*. Five cases were laboratory confirmed and 10 cases met the probable case definition specific to the outbreak. No specific source of illness was identified. Additionally, two other cases with no link to the adult day center matched the outbreak strain. Some of Maine's salmonella cases were linked with exposures from national outbreaks.

In Maine, the most commonly seen types of salmonella in 2009 were enteritidis, typhimurium, oranienburg, newport and paratyphi B (L)+ tartrate.

Prevention and Control

Salmonellosis can be prevented using the following guidance:

- Wash hands with soapy water for at least 20 seconds before and after eating or preparing food, after using the toilet, after changing diapers, and after handling animals (especially reptiles)
- Wash counters and cooking utensils with hot soapy water before and after preparing food
- Rinse all fresh fruits and vegetables under running water
- Separate raw meat, poultry, seafood and eggs from other foods in the grocery cart and in the refrigerator at home

- Use separate cutting boards for fresh fruits and veggies and for raw meat, poultry, and fish
- Do not reuse plates that held raw meat, poultry, seafood or eggs
- Do not eat raw or cracked eggs, unpasteurized milk, or other dairy products made with raw unpasteurized milk
- Avoid letting infants or young children come into contact with reptiles, such as turtles or iguanas
- Do not let children hold, cuddle or kiss baby chicks or other young birds
- Immediately wash hands after handling reptiles, touching birds, including baby chicks and ducklings, or spending time in their environment
- If caring for a person with salmonellosis wash hands well after contact with person's stool, undergarments or diapers
- Contact your healthcare provider if you are experiencing diarrhea for a long period of time
- People with salmonellosis should not prepare or serve food/beverages for others until their diarrhea has resolved

Salmonellosis is on the Notifiable Conditions List and can be reported in Maine by calling 1-800-821-5821, or by faxing reports to 207-287-6865. All specimens must be sent to the Health and Environmental Testing Laboratory for confirmation.

For more information on Salmonellosis:

- Maine CDC website
<http://www.maine.gov/dhhs/boh/ddc/epi/disease/salmonellosis.shtml>
- Federal CDC website
<http://www.cdc.gov/salmonella>
- HETL website <http://www.maine.gov/lab>
- FDA website
<http://www.fda.gov/Food/FoodSafety/FoodborneIllness/default.htm>
- USDA website
http://www.fsis.usda.gov/factsheets/salmonella_questions_&_answers/index.asp